

PTO/SB/08b (08-08)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet	1	of	5	Attorney Docket Number	59894(49991)
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U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code, ² (<i>If Known</i>)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
AA*	US-3,892,678		07-01-1975	Haliasz et al.	
AB*	US-3,935,299		01-27-1976	Kiselev et al.	
AC*	US-4,017,528-A		04-12-1977	Unger et al.	
AD*	US-4,029,583		06-14-1977	Ho Chang et al.	
AE*	US-4,104,363		08-01-1978	Vozek et al.	
AF*	US-4,169,069		09-25-1979	Unger et al.	
AG*	US-4,324,689		04-13-1982	Shah	
AH*	US-4,327,191		04-27-1982	Dromard et al.	
AI*	US-4,724,207-A		02-09-1988	Hou et al.	
AJ*	US-4,775,520		10-04-1988	Unger et al.	
AK*	US-4,889,632		12-26-1989	Svec et al.	
AL*	US-4,911,903		03-27-1990	Unger et al.	
AM*	US-4,923,610		05-08-1990	Svec et al.	
AN*	US-4,952,349		08-28-1990	Svec et al.	
AO*	US-4,983,369		01-08-1991	Barder et al.	
AP*	US-5,068,387		11-26-1991	Kleyer et al.	
AQ*	US-5,071,555		12-10-1991	Fritz et al.	
AR*	US-5,108,595		04-28-1992	Kirkland et al.	
AS*	US-5,137,627		08-11-1992	Felbush	
AT*	US-5,154,822		10-13-1992	Simpson et al.	
AU*	US-5,177,128		01-05-1993	Lindemann et al.	
AV*	US-5,194,333		03-16-1993	Ohnaka et al.	
AW*	US-5,256,388		10-26-1993	Nystrom et al.	
AX*	US-5,271,833		12-21-1993	Funkensbusch et al.	
AY*	US-5,298,833		03-29-1994	Hou	
AZ*	US-5,374,755		12-20-1994	Neue et al.	
AA1*	US-5,378,790-A		01-03-1995	Michalczyk et al.	
AB1*	US-5,425,930		06-20-1995	Anderson	
AC1*	US-5,453,185		09-26-1995	Frechet et al.	
AD1*	US-5,498,678		03-12-1996	Steffler	
AE1*	US-5,548,051		08-20-1996	Michalczyk et al.	
AF1*	US-5,558,849		09-24-1996	Sharp	
AG1*	US-5,565,142		10-15-1996	Deshpande et al.	
AI1*	US-5,624,875		04-29-1997	Nakanishi et al.	
AI1*	US-5,637,135-A		06-10-1997	Ottenstein et al.	
AJ1*	US-5,650,474		07-22-1997	Yamaya et al.	
AK1*	US-5,651,921		07-29-1997	Kaljou et al.	

Examiner Signature	/Robert Loewe/	Date Considered	03/15/2010
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. * CITE NO.: Those application(s) which are marked with an single asterisk (*) next to the Cite No. are not applied under 37 CFR 1.98(a)(2)(ii) because that application was filed after June 30, 2003 or is available in the I.P.W. * Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.L./

PTO/SB/08b (08-06)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet	2	of	5	Attorney Docket Number	59894(49991)
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U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number+Kind Code ² (# known)	MM-DD-YYYY		
AL1*	US-5,667,674	09-16-1997	Hanggi et al.		
AM1*	US-5,728,457	03-17-1998	Frechet et al.		
AN1*	US-5,734,020	03-31-1998	Wong		
AO1*	US-5,856,379-A	01-05-1999	Shiratsuchi et al.		
AP1*	US-5,869,152	02-09-1999	Colon		
AQ1*	US-5,965,202-A	10-12-1999	Taylor-Smith et al.		
AR1*	US-5,976,479	11-02-1999	Alcaraz et al.		
AS1*	US-6,017,632	01-25-2000	Pinnavaia et al.		
AT1*	US-6,022,902	02-08-2000	Koontz		
AU1*	US-6,027,643	02-22-2000	Small et al.		
AV1*	US-6,090,477	07-18-2000	Burchell et al.		
AW1*	US-6,136,187	10-24-2000	Zare et al.		
AX1*	US-6,183,867	02-06-2001	Barthei et al.		
AY1*	US-6,207,098	03-27-2001	Nakanishi et al.		
AZ1*	US-6,210,570	04-03-2001	Holloway		
AA2*	US-6,227,304	05-08-2001	Schlegel		
AB2*	US-6,238,565-B1	05-29-2001	Hatch		
AC2*	US-6,248,686	06-19-2001	Inagaki et al.		
AD2*	US-6,271,292	08-07-2001	Mager et al.		
AE2*	US-6,277,304	08-21-2001	Wei et al.		
AF2*	US-6,281,257	08-28-2001	Ma et al.		
AG2*	US-6,288,198	09-11-2001	Mechtel et al.		
AH2*	US-6,313,219	11-06-2001	Taylor-Smith		
AI2*	US-6,380,266	04-30-2002	Katz et al.		
AJ2*	US-6,395,341	05-28-2002	Arakawa et al.		
AK2*	US-6,465,387	10-15-2002	Pinnavaia et al.		
AL2*	US-6,476,098	11-05-2002	Arakawa et al.		
AM2*	US-6,688,035	02-03-2004	Jiang et al.		
AN2*	US-7,175,913	02-13-2007	O'Gara		
AO2*	US-7,223,473	05-29-2007	Jiang et al.		
AP2*	US-7,250,214	07-31-2007	Walter et al.		
AQ2*	US-20010033931	10-25-2001	Jiang et al.		
AR2*	US-20030150811	08-14-2003	Walter et al.		
AS2*	US-20040191516	09-30-2004	Jiang et al.		
AT2*	US-20050230298	09-20-2005	Jiang et al.		
AU2*	US-20070135304	06-14-2007	Walter et al.		
AV2*	US-20080053894	03-06-2008	O'Gara		
AW2*	US-20070243383	10-18-2007	Jiang et al.		

Examiner Signature	/Robert Loewe/	Date Considered	03/15/2010
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¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

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Sheet	3	of	5	Attorney Docket Number	59894(49991)
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Complete if Known

Application Number	10/587,598-Conf. #3666
Filing Date	April 27, 2007
First Named Inventor	John E. O'Gara
Art Unit	1796
Examiner Name	Moore, Margaret G.

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ² -Number ³ -Kind Code ⁴ (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁵
BA	EP-0852334		07-08-1998	Bio Rad Laboratories		
BB	EP-1163050		12-19-2001	Waters Investments Ltd		
BC	JP-2893104		05-1999			
BD	JP-7247180		09-26-1995	Soga Naohiro et al.		
BE	WO-98/058253		12-23-1998	Merck Patent GMBH		
BF	WO-99/037705		07-29-1999	The Regents of the University of California		
BG	WO-00/45951		08-10-2000	Waters Investments Ltd et al.		
BH	WO-01/18790		03-2001	Sundqvist et al.		
BI	WO-03/14450		02-20-2003	Waters Investments Ltd et al.		
BJ	WO-03/22392		03-20-2003	Waters Investments Ltd et al.		
BK	WO-04/41398		05-21-2004	Waters Investments Ltd et al.		
BL	WO-2005/079427		09-01-2005	Waters Investments Ltd et al.		

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue numbers ² , publisher, city and/or country where published.	T ³
CA	ASIAIE et al. "Sintered Octadecylsilica as Monolithic Column Packing in Capillary Electrochromatography and Micro High-Performance Liquid Chromatography", J. Chromatogr. A, 806: 251-263 (1998).		
CB	BEREZNIETSKI, et al. "Characterization of silica-based octyl phases of different bonding density II. Studies of surface properties and chromatographic selectivity," 1998. J. Chromatogr. A 828:59-73.		
CC	BOURY et al. "Generation of porosity in a hybrid organic-inorganic xerogel by chemical treatment," 1999. New J. Chem. 23: 531-538		
CD	BOURY et al., "Hybrid organic-inorganic xerogel access to meso- and microporous silica by thermal and chemical treatment." 1999. Chem. Mater. 11:281-291		
CE	COLLILOUD, et al. "Oriented and covalent immobilization of target molecules to solid supports: synthesis and application of a light-activatable and thiol-reactive cross-linking reagent," 1993. Bioconjugate 4:528-536.		
CF	CZAJKOWSKA et al., "Adsorption, thermogravimetric, and chromatographic studies of bare silicas and silica-based octyl bonded phases," 1998. J. Liq. Chromatogr. Relat. Technol. 21:1957-1977		
CG	CHUJO et al., "New Preparative Methods for Organic-Inorganic Polymer Hybrids", Polymeric Materials: Science & Engineering 2001, 84, 783		

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of

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Complete if Known

Application Number	10/587,598-Conf. #3666
Filing Date	April 27, 2007
First Named Inventor	John E. O'Gara
Art Unit	1796
Examiner Name	Moore, Margaret G.
Attorney Docket Number	59894(49991)

NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
CH	CHUJO et al., "New Preparative Methods for Organic-Inorganic Polymer Hybrids", Mrs Bulletin/May 2001; 389-392		
CI	DULAY et al., "Preparation and Characterization of Monolithic Porous Capillary Columns Loaded with Chromatographic Particles", Anal. Chem., 70(23): 5103-5107 (1998).		
CJ	FENG et al., "Synthesis of Polymer-Modified Mesoporous Materials Via the Nonsurfactant-Templated Sol-Gel Process", Polymer Preprints 2000, 41(1), 515-516		
CK	FENG et al., "Synthesis of Polystyrene-silica hybrid mesoporous materials via the nonsurfactant-templated Sol-Gel Process", J. Mater. Chem., 2000, 10, 2490-2494		
CL	GOLDSTEIN, et al., "Microwave Sintering of Amorphous Silica Powders", J. of Mat. Sci. Letters, 16: 310-312 (1997).		
CM	GRUN et al., Microporous and Mesoporous Materials 1999, 27, pp. 207		
CN	HILEMAN et al., Anal. Chem. 1973, 45, pp. 1126		
CO	HANSON, M. J. Chromatography A, 1993, 656, pp. 369, cited by other.		
CP	INAGAKI, et al. J. Am. Chem. Soc. 1999, 121, 9611.		
CQ	JONES et al., "The oxidation of the carbon-silicon bond," 1996. Tetrahedron, 52(22):7599-7662		
CR	MASKOS et al., "Oligonucleotide hybridizations on glass supports: a novel linker for oligonucleotide synthesis and hybridization properties of oligonucleotides synthesised in situ," 1992. Nucleic Acids Research 20(7):1679-1684		
CS	MACBEATH et al., "Printing proteins as microarrays for high-throughput function determination," 2000. Science 289:1760-1763		
CT	NAWRACKI et al., "Influence of silica surface chemistry and structure on the properties, structure and coverage of alkyl-bonded phases for high-performance liquid chromatography," 1988. J. of Chromatography 449(1):1-24		
CU	NAWRACKI, "Silica surface controversies, strong adsorption sites, their blockage and removal, Part 1," 1991. Chromatographia 31(3-4):177-192		
CV	NEUE et al., "Use of high-performance LC packings from pH 1 to pH 12," 1999 American Laboratory, p. 36-39		
CW	O'GARA et al., "Simple preparation of C8 HPLC stationary phase with an internal polar functional group," 1995 Analytical Chemistry 67:3809-13		
CX	O'GARA et al., "Dependence of cyano bonded phase hydrolytic stability on ligand structure and solution pH," 2000 J. Chromatogr. A 893:245-251		
CY	PETRO et al., Chromatographia, 1993, 9/10, pp. 549		
CZ	PERRY, R.J., Chemtech, 1999, pp. 39		

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		Filing Date	April 27, 2007		
		First Named Inventor	John E. O'Gara		
		Art Unit	1796		
		Examiner Name	Moore, Margaret G.		
Sheet	5	of	5	Attorney Docket Number	59894(49991)

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CA1	REYNOLDS et al., "Submicron sized organo-silica spheres for capillary electrochromatography," 2000 J. Liq. Chrom & Rel. Technol., 23(1):161-173				T ²
CB1	Silsesquioxanes - An Introduction to Hybrid Inorganic - Organic Composites - Data by Sigma Aldrich. Retrieved 12/4/2006 from http://www.ezom.com/details.asp?ArticleID=2934				
CC1	TAMAKI et al., "Synthesis of polystyrene/silica gel polymer hybrids via in-situ polymerization method", Polymer Bulletin 39, 303-310				
CD1	TAMAO, K. "Oxidative cleavage of the silicon-carbon bond: Development, mechanism, scope, and limitations." 1996 Advances in Silicon Chemistry, 3:1-62.				
CE1	TAMAO et al., "Oxidative cleavage of silicon-carbon bonds in organosilicon fluorides to alcohols." 1992 Tetrahedron 39(6):983-990				
CF1	TAMAO et al., "Hydrogen peroxide oxidation of the silicon-carbon bond in organoalkoxysilanes," 1983 Organometallics 2: 1694-1696				
CG1	TANG et al., "Monolithic Columns Containing Sol-Gel Bonded Octadecylsilica for Capillary Electrochromatography", J. Chromatogr. A, 837: 35-50 (1999).				
CH1	TANG et al., "Continuous-Bed Columns Containing Sol-Gel Bonded Octadecylsilica for Capillary Liquid Chromatography", J. Microcolumn Separations, 12: 6-12 (2000).				
CI1	UENO et al., "Compaction and Sintering Behavior of Silica Particles Surface-Modified by Al Chelate Compounds", Journal of the Ceramic Society of Japan, 109(3): 210-216 (2001).				
CJ1	UNGER et al., "Recent developments in the evaluation of chemically bonded silica packings for liquid chromatography", J. Chromatogr. 1976, 125(1): 115-127				
CK1	WEI et al., "Synthesis and Biotechnological Application of Vinyl Polyme-Inorganic Hybrid...", Chinese Journal of Polymer Science, Vol. 18, No. 1, (2000), 1-7				
CL1	WEI et al., "Polymethacrylate-silica Hybrid nanoporous materials...", Adv. Mater. 2000, 12, No. 19, October 2, 1448-1450				
CM1	XIN, et al., "Design and Evaluation of a New Capillary Electrophoresis System", Electrophoresis, 20: 67-73 (1999).				
CN1	YANG et al., "Oxidative cleavage of carbon-silicon bond as a new method to characterize bonded stationary phases on silica gel," 1998 Anal. Chem. 70:2827-2830				

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